



Mimulus MEMO

California Native Plant Society
Kern County Chapter
Fall 2006

Thank You!

Press Releases- Debby Kroeger

Hospitality- Laura Stockton, Debby Kroeger, Linda Cooley

March Chapter Meeting Location- Marcia Wolfe

Field Trip for Steve Hartman- Linda Cooley, Ellen Cypher, Steve Hampson, Lucy Clark

Representing Kern at the March Chapter Council Meeting- Steve Hampson, Linda Cooley

Sand Ridge Preserve Sahara Mustard Bashing- Lucy Clark, Lorraine and Arthur Unger

Weeding the Chaparral Plant Community at CALM- Larry Elman, Erma Colvin, Lucy Clark, Debby Kroeger, Steve Hampson, Lorraine and Arthur Unger

Providing Breakfast for the Ridgecrest Chapter Council Meeting- Ellen Cypher, Linda Cooley, Laura Stockton, Steve Hampson, Debby Kroger

Scouting/Info Gathering at Los Angeles Revegetation site: Andy Honig, Steve Hampson, Bill Cooper

Design and Implementation of Kern Display Board- Laura Stockton, design-impaired Lucy Clark

CNPS Promotion for Saturday Night at CALM (on her own time!)- Debby Kroeger

Professional Advice- Marcia Wolfe

Field Trip Leaders- Linda Cooley, Steve Hampson, Alison Sheehey, Joan Stewart, Janet Westbrook

WELCOME (BACK) TO NEW (AND RENEWING) MEMBERS

Jane Baron, Tehachapi
Lara Hartley, Barstow
Alison Sheehey, Weldon

Zina Dean, Pine Mt. Club
Marianne Kistler, Ridgecrest
Ray Yinger, Bakersfield

Ann Etue, Bakersfield
Joel Robinson, Frazier Park

The Kern Chapter of CNPS invites you to a **Landscape Design Workshop** on **Saturday, September 23, 2006** at **10:00AM** at the **California Living Museum**, 10500 Alfred Harrell Hwy in Bakersfield

- ~ Learn how to layout a native plant landscape
- ~ See the native plants in CALM's botanic gardens

The workshop will be taught by Linda Bliss. Linda is local and has worked in landscape design for several years now. Linda has a good knowledge of native plants and encourages their use as much as possible. Linda will be building her workshop around many of the foundation plants that are "usuals" at the sale, as well as some color and "eye-catcher" plants. The purpose of the workshop is to help people know/ decide which plants they want to purchase at the sale. We will be able to take orders the day of the workshop. A plant availability list will also be at the workshop.

The workshop is included with admission to CALM. For more information call 872-2256 x12.

In the Field



Calochortus westonii

Spring moved up the mountains, and the top end of Rancheria Rd. came and went. There are lots of interesting plants there, but one local endemic that people come to see is the Shirley Meadows Star-Tulip (*Calochortus westonii*). First described in 1927, the type colony was destroyed to make way for the Shirley Meadows ski run, but there are other colonies near there that don't seem to be in immediate danger, and have reliably bloomed for many years now. Lara Hartley took this picture last year. And look for the Greenhorn Checkerbloom (*Sidalcea rannunculacea*) in the same area. It isn't as highly localized as *C. westonii*, but is restricted to the southern Sierra, in Kern and Tulare counties.



Asclepias californica



Asclepias cordifolia



Asclepias eriocarpa

There are quite a few milkweeds along Rancheria Rd. We've seen *Asclepias californica*, *cordifolia*, *eriocarpa*, *erosa* and *fascicularis*. *Asclepias californica* and *eriocarpa* are both fairly common and have wonderful, fuzzy-white leaves, but *A. californica* has striking maroon flowers. It is sometimes available for sale. *A. eriocarpa* often has whorled leaves and is more upright. *A. cordifolia* is not really rare, but the only one **we** have ever seen is by the side of Rancheria Rd. *A. erosa* is interesting in that it frequently has tarantula hawks (huge wasps that hunt tarantulas) visiting the flowers. These pictures are from CalPhoto and were taken by Richard B. Lewis III (BonTerra Consulting), Brother Alfred Brousseau and Charles E. Jones, respectively.



Erythronium pusaterii

The trip to Jordan Peak was great! We saw both the intended fawn lily (*Erythronium pusaterii*) AND *Fritillaria pinetorum*. *E. pusaterii* is only known from a couple locations, both in Tulare county. *F. pinetorum* is not as localized, but is equally striking in its own way. There were lots of both species. These pictures were taken by Clyde Golden. We were invited up into the fire lookout tower, but most of us were so busy investigating all the plants that only a couple people found time to go up and admire the view, which was admittedly pretty nice too. A short plant list for the site is available at our web page.

Check out the on-line version of the newsletter to see these pictures in color.



Fritillaria pinetorum

Many thanks to CNPS member David Schwartz who identified the mystery fern from Mill Creek in the previous issue of Mimulus Memo as *Pentagramma pallida* rather than the suspected *Notholeana californica*, which had not been reported in Kern county. (Hey, it wasn't in bloom when we tried to key it out!) While uncommon, *P. pallida* has been previously observed in Kern County at three locations, so it isn't a first for that one. But there probably are still a number of unreported plants in Kern County, so keep your eyes open. And *Notholeana californica* might well be out there. David said we could include his contact information if other members have fern-related questions. He can be reached at XericFerns@aol.com.

Upcoming Events

CNPS Landscape Design Workshop on Saturday, September 23, 2006 See first page for details.

Randi McCormick, a native plant expert from CNPS, will give a talk to the Buena Vista Group of the Sierra Club on **Saturday October 10/7/06** at 8:30 a.m. - at the Hill House on Truxtun (700 Truxtun). Breakfast is served before the program but is optional. This is planned to fall just before CNPS's Annual Plant Sale.

25th Annual Native Plant Sale

Sponsored by the Kern Chapter of CNPS

At the California Living Museum (CALM) 10500 Alfred Harrell Hwy, Bakersfield on **Saturday, October 21, 2006**

8a.m. – 9a.m.: early admission for CNPS and CALM members (memberships available at the gate; bring your membership card)

9a.m. – 4p.m.: all others

trees!, shrubs!, perennials!, plant care information!, native plants for ALL types of garden conditions!

For more information Email LucyG391@gmail.com or call Debie Kroeger at 872-2256 x12.

NOTE: Last year, we sold out before noon, which is good and bad. It is good that there were so few "leftover" plants; it is bad in that we could have sold many more plants. We are in need of another truck or trailer to make a trip to Las Pilitas on October 19th. This is the trip that Randi & Debbie make to hand pick the color and unusual plants. It is a long day, but fun.

We will again need help on Friday, Oct 20th to set the plants out for the sale.

We will need help on sale day, in shifts from 7:00am – 5:00pm. We will be taking sign-ups in the fall.

For those of you concerned about clean air, Valley Fever spores, the last natural riparian area near Bakersfield (Poso Creek), wildlife and birds, Yokut artifacts, and MORE TRAFFIC:

Please attend the K.C. Planning Commission meeting at 7:00 p.m. on **Sept.28** (NOT Sept 14). A hearing on the State Vehicular Recreation Park (off-highway vehicle park) planned for Round Mountain Road will be held in the Board of Supervisors Chambers on the first floor of the K.C. Admin. Center, 1115 Truxtun (and "N"). The off-roaders will be out in force. Please join those of us who would like to see a big buffer around it, and Poso Creek protected. It is reported to be a "done deal", but if enough people show up in support of the idea of a reduced use area, surrounded by a wide buffer, maybe we can influence the outcome on behalf of the things we value. OR, maybe we can influence the Planning Commission to move this park out of the valley! -Lucy Clark

Our own CNPSer and Membership Chair, Dr. Ellen Cypher, has been reappointed to the Carrizo Plain National Monument Advisory Committee by the new Secretary of the Interior Kempthorne. She will serve until February 1, 2009. Congratulations, Ellen! We know you will continue to advocate for the native plants and animals there.

A Family Index for Twisselmoe!

When keying out plants using Moe & Twisselmann, do you miss the family index found on the inside cover in the old, red Munz? So did we, so we made one. Here it is. You can cut it a bit smaller than the page size and simply tape it in. It is also available in PDF form at our website, so you can print additional copies for all your friends. The font in the PDF version is a little nicer.

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A message from Elaine Jackson, President of the East Bay Chapter, Berkeley

June 5th, 2006

This June's CNPS Chapter Council meeting, held in Ridgecrest, was one of the best I have attended. The Board Meeting on Saturday morning facilitated by Jim Bishop and Charli Danielson ran smooth and covered a lot of material, as did the afternoon session even though the planned Horticulture program did not come about. That was no problem, as I am sure you all know, we "plant people" are never at a loss for words.

Getting to and from Ridgecrest was also the "best yet" thanks to Lucy Clark and Steven Hampson. I took 99 to 155 to 178. On 155, as I started my climb, the wild flowers jumped out at me. I drove as slowly as I could and stopped several times to view the view. Fremontia covered the hillsides, lots of Erysimum and so many other blues and yellows, the higher I went the more abundant the flowers were. I then found Rancheria Road and ventured down the dirt road in my rented black, that was fast turning grey, Hyundai. Thank goodness for Lucy giving accurate mileage marks, I did find the 1st meadow and did see the missing sign that read something like the Mariposa Lily Preserve. It was lying on the ground under some brush at the foot of a tree. I tiptoed though the meadow trying not to step on any of the abundant displays of Collinsia and found 2

blooming *Calochortus westonii*, but no *Sidalcea* so I walked up the road a piece and found another larger meadow filled with blooming *Sidalcea*. I then saw this small fragile looking moth or butterfly. Its colorings did not seem of nature, the wings were a soft sky blue, closer to the body, a very gentle pale pink took over. There were 2. I was so taken by them that I started up a conversation asking them who they were and how did they happen to come about acquiring those dreamy colors. Just then I heard a motor of some type and as I looked up the road I saw a family of ORVers rounding the bend. As they passed they all waved and I waved back. I then decided it was time for me to get back on the road. Back to 155 to view zillions of *Aesculus* in bloom, lots of *Arctostaphylos*, more *Fremontodendron*, *Asclepias* all over the road side and these are just the ones that I could name, there were lots of others that looked familiar but unfortunately their names did not come to me from my lame data base.

I took the same route home on Sunday morning. Driving in the other direction on 155 I saw even more *Fremontia* just everywhere. I have never seen such a beautiful display of yellow. I also spotted a lovely bushy looking *Cornus* in full white bloom in a shady spot of a turn. What a lovely trip it was.

Going to Seed

Q: *I got seeds for *Dicentra chrysanth* (golden eardrops) on Sherman Pass road last week....Do you know anything about growing them??*

A: *Fire treatment. In the fall (November) plant seeds in a moist (not wet) soil and burn dry pine-needles or wood shavings over the pot (not a plastic pot!). Let it cool and then water it completely and leave outside so it gets the cold fall/winter temps. My daughter did two Science Fair projects on this and used dry grass and wood shavings. It worked very well for some seeds that had poor results otherwise. (*Scrophularia* had great germination and I had never gotten it to sprout before -- too bad I lost them all in the spring after transplanting) -Stephen Cooley*

Greetings Friends of the Wind Wolves Preserve

We are in the process of recruiting an elite team of volunteers who will specialize in various habitat restoration projects on the WindWolves Preserve. This core group of dedicated individuals will receive a special training prior to fieldwork. Training will include an introduction to the natural and cultural history of the preserve, plant and animal identification, a study in habitat restoration techniques, and a tour.

This is an outdoor, all-weather opportunity. Qualified individuals should be in good physical condition and willing to participate in manual labor activities. College students who are in the field of biology, ecology, environmental science, conservation, forestry, horticulture, or land management are encouraged to participate. This valuable field experience may be utilized as college credit.

Activities include: Watering habitat restoration sites and repairing dripline irrigation systems; maintaining a native plant nursery, collecting native seed, and propagating container stock; removing non-native weeds such as tamarisk, perennial pepperweed, yellow star thistle, horehound, and Russian thistle (tumbleweed); embarking on experimental biological soil crust restoration project which involves lichen and moss collection, fungus and bacteria cultures, and soil inoculation; trapping bullfrogs and other non-native pests; embarking on experimental native grassland restoration, planting and seeding habitat restoration sites; biological research (plant and animal surveys); recreation impact monitoring; or create your own project related to your special interest or school major. There may be opportunities to camp on site depending on the location and extent of the project.

To sign up or for more information, call our main office at (661) 858-1115.

Seminars at the San Luis Obispo Botanic Garden

The San Luis Obispo Botanic Garden has several upcoming seminars that might be of interest to members of CNPS. For more information, go to their website: http://www.slobg.org/Events_And_Activities.htm

Grasslands of California

by Breck McAllester

Introduction

California grasslands make up roughly 25% of habitat types remaining in the state. These grasslands are beautiful green carpets in late winter through early summer and golden blond swathes in summer through fall. From a distance, they don't look any different than they did 150 years ago. But on closer inspection their true composition is very different indeed. In fact, "Gaia's" garden has been invaded by exotic weeds!

What did California foothill and valley grasslands really look like a hundred and fifty years ago?

While nobody alive knows for sure--early European travelers were largely untrained as botanists and plant geographers--oblique early accounts described vast expanses of tall grasses. In 1848, John C. Fremont wrote of bunchgrass prairies in the Sierra Nevada foothills and inner Coast Ranges. He also spoke of an area near the site of present day Sacramento with grass that was "smooth and green" among open groves of large oaks. In February of 1828, Jedediah Smith wrote "The whole face of the country is a most beautiful green, resembling a flourishing wheat field".

And while those accounts, to the unseasoned, may not seem so different from what we see today, in actuality the grasslands of California are made up of very different plants than were prevalent just 150 years ago. Most plant-smart people find it aggravating that the aggressive "foxtail" type grasses burrowing into their socks and ankles really don't belong here. The wild oats, cheatgrass, ripgut and red bromes are not American natives at all. Their introductions occurred as part of the Columbian invasion of North America beginning in the mid-1500s. Many of these invading grasses and forbs really are barnyard weeds of southern France, Spain, Portugal and Great Britain. Their seeds came to the New World both deliberately and as stowaways with conquistadors, Jesuits and pilgrims.

Several plants brought to the New World are extraordinary additions to our state's general welfare and productivity. Such beneficial plants include wheat, wine grapes and olives. Accolades cannot be given, however, to the "weeds" that were exported from the Eurasian region during the Columbian invasion of the New World.

Physical mechanisms for the vegetation change

Evolution of Californian native grasses (pre-Columbian period) was probably not influenced to any major extent by grazing. The light grazing that grasslands did receive was seasonal by nomadic groups of mule deer, "tule" elk and pronghorn antelope. Without significant adaptive pressure, native grasses did not evolve resistance to the dramatic impacts that they incurred later. In the late sixteenth century (and continuing today in some places) California grasses and forbs were subjected to extreme grazing pressures due to overgrazing.

After introduction by the Spanish in the mid-1500s, livestock--cattle and sheep-- became ubiquitous on the California landscape by the nineteenth century. Grazing was probably most intense during the 1850s in order to supply meat for the burgeoning gold rush. Historical accounts indicate that at this time of range overstocking, there was a sustained drought period (late 1850s). The drought was followed by a period of heavy precipitation and flooding in the 1860s. Effects of overgrazing, combined with drought, decimated California's understory vegetation and primed the landscape for heavy erosion from the heavy rains.

The introduced Eurasian vegetation has a cool-weather active, summer dormant, annual habit that allowed it to rebound quickly to such landscape disturbances. The perennial, slower growing native grasses were relatively powerless in defending their original claims to California's grasslands during this time.

By 1860 there were at least 91 alien weeds naturalized in the state and they began to swiftly overwhelm the landscape. Cultivation, with its greatest extent during the 1880s, exasperated this conversion with tillage and dry-land farming methods preceding extensive irrigation. Today there are more than 1000 naturalized plants in the state, including about 175 species of introduced grasses. And while there are around 300 native grass species found in California, on average 90% or greater of the plant cover and biomass of grasslands are made up of exotic weeds. That percentage is somewhat lower in northern and coastal California due to higher precipitation totals, milder climates and a reduced history of tillage. But only about 2 percent of native grassland remains in California today--making it one of the rarest habitats in North America, if not the world.

Extent and types of original native grassland

Since there is little technical historical botanical information available, the vacuum has allowed much (often partisan) debate as to the actual composition and extent of pre-agriculture native perennial grasslands in California. It seems reasonable, with current knowledge, to posit that the dominant bunchgrasses that Fremont spoke of in the Sierra Nevada foothills (1848) were predominantly purple or nodding stipa (*Nassella pulchra* Barkworth or *N. cernua* Barkworth, respectively). California melic (*Melica californica*), Sandberg's bluegrass (*Poa secunda*), blue wild rye (*Elymus glauca*), slender wheatgrass (*Agropyron trachycaulum*), Junegrass (*Koeleria cristata*) and Squirreltail (*Elymus elymoides*) were probably also very common components out of the many possible suspects.

The "smooth and green" native grass Fremont and Smith (1828) found in valley bottoms was probably creeping wild rye (*Lemus triticoides* Pilger). This is a fairly hardy rhizomatous grass that stays green much of the year. It has wide smooth leaves and a flowering spike that superficially resembles wheat.

Creeping wild rye was probably dominant in the finer, deeper, and wetter Central Valley soils. Sedges and rushes were also important here in the wet valley bottoms. Bunch grasses

were probably most representative in upland, courser, more well-drained soils. Scattered remnants of such grasses are still found in a few original locales, today. These perennial grasses were interlaced with many native annual forbs and a few annual grasses such as small fescue (*Vulpia michrostachys*) and six-weeks fescue (*V. octiflora*.) Certain summer active annual forbs such as sunflowers and tarweeds became important in the dry season throughout the foothills and valley bottoms. They are still prevalent, today, after the dominant non-native annual's growing cycle has been exhausted.

Biology of the change

The Eurasian invaders displaced native plants by being incredibly competitive in California's Mediterranean climate-- the regional climate where they evolved. This is a climate of wet winters and hot dry summers. In southern Europe and northern Asia the annual grasses and forbs adapted through millennium to periodic droughts and heavy grazing. There they developed the characteristics that make them so tenacious and successful in California. In California's Mediterranean climate, Eurasian annuals start growing earlier in the year (in winter)-- getting a jump-start or competition edge on native perennial grasses for available water and light --well before the natives become active. These exotic annuals are summer dormant, as seeds, and produce seed under the most adverse grazing and climatic conditions. The annual seedbanks regularly contain 10 thousand or more plants per square meter and the seedbed remains viable for several years.

While It takes thousands of years to evolve resistance to grazing and competition, California's natives have been overwhelmed in just a few hundred years time. Highly opportunistic, weed biology makes it difficult or impossible for the existing natives to achieve progress toward repopulation and viability within their original ranges, today.

Benefits of native grassland

Many non-native grasses were deliberately brought into the western US as forage for livestock as pioneering Europeans were quite familiar with them. They have and do play a valuable role as range fodder for livestock, today. However in the absence of overgrazing, natives probably are/were at least as valuable as non-natives in this respect. To many (myopic) range managers today, though, that point is moot-- because of the overwhelming dominance of non-natives grasses on the landscape.

Some of the superior attributes of native grasses are describe below:

Native grasses make excellent wildlife habitat, providing cover, high quality forage and nutritional seed crops encouraging and supporting a highly diverse assemblage of fauna.

Some native perennial bunchgrass plants are thought to be a hundred years old or more. This inherent longevity is, in part, a result of deep root systems. The deep root systems are very important for erosion control purposes.

The spacing between plants of native perennial bunchgrasses is greater than introduced annuals and the perennial vegetation does not die every year. As a result, there is less accumulation of humus or fuel on the ground making it less likely to carry a wildfire than with annual grasslands. Fires that do occur in landscapes dominated by native grasses are smaller, less intense and of shorter duration.

As a consequence of greater spacing between plants, there is greater access to the ground surface for native fossorial animals such as kangaroo rats, antelope ground squirrels, mice, voles and blunt-nosed leopard lizards. This greater spacing has been shown to enhance the animals' activities. The spacing that benefits fossorial animals, also, promotes better fertility of the soils as fossorial animals continue to churn it over.

Perennial bunchgrass spacing may slow and reduce moisture and nutrient losses from soils to a greater extent than in annual grasslands. This may allow for more diverse populations of plants

This high degree of functionality is a result of eons of association with local climates, landforms and other flora and fauna. In addition to the known or postulated attributes described, there are doubtless many other benefits of native grasses remaining to be discovered.

Prospects for the future

Leading individuals in this conservation effort, and their students, such as Mark Stromburg at the University of California's Hasting Natural History Reservation, John Menke and Kevin Rice of U.C. Davis; Paul Kephart of Rana Creek Habitat Restoration, John Anderson of Hedgerow Farms, and the California Native Grassland Association have made great strides in research and promotion of California's native grasslands. These researchers have discovered ways of shifting the competitive balance in favor of native grass dominance. They have developed management techniques that promote resistance to later invasion by non-natives. Such accomplishments give high hopes for the prospects of the future-- to preserve and enhance the remaining stands of native grasses of California.

Today, Californians have the hindsight to understand some of the disastrous ecological mistakes of the past. Given that, will we have the foresight to preserve our native grass habitats and return them to their former functionality and grandeur? Or will we let the remaining 2 percent continue to fall and degrade --to a final obit of history?

Breck McAllester was active in restoration biology here in Kern County but is now off restoring northern California. He can be reached at breckmc1@netzero.net

*for more information on this subject see:
www.hastingsreserve.org -> Natural History -> Native Grasslands*

Wind Wolves Work Weekend

Greetings everyone!

Autumn is just around the corner, so its time to get back out there and do some good conservation work! The first volunteer work party of Fall 2006 will be held on September 9th. The remaining events for 2006 will happen on October 7th, November 11th, and December 9th.

ANNOUNCING The September 9 2006 WIND WOLVES PRESERVE VOLUNTEER WORK PARTY

WHERE: Pleito Creek Canyon

WHEN: Saturday; September 9th, 2006

MEET AT 9:00am, at The Crossing in San Emigdio Canyon
We'll be whacking tamarisk in Pleito Creek Canyon

PLEASE BRING... your lunch, a water bottle to keep hydrated, leather work gloves, sturdy boots, a good hat, and layered clothing.

WE WILL PROVIDE... drinking water, a barbecue dinner, and a warm campfire.

YOU MUST RSVP IF YOU WANT TO PARTAKE OF THE BARBECUE!!

Call (661) 858-1115 or (661) 747-0374 to RSVP

Those who wish, may camp at "The Crossing" in San Emigdio Canyon Saturday night. Please, NO DOGS, & SMOKING ONLY INSIDE THE CAB of your own vehicle

David Clendenen

Wind Wolves Preserve Manager

Our Kern County CNPS website is at <http://www.cnps.org/chapters/kern/>

If you know of some sites we should include links to, please let us know. Or, if you have some pictures or information on your own home page that you would like to share, that would be great! We would like to start a "local links" section on our web page where Kern CNPS members can share their thoughts, pictures, trips, gardening experiences, or whatever with other members.

This newsletter, and some past newsletters can be found there in PDF format.

CNPS – Kern County Chapter
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The mission of the California Native Plant Society is to increase understanding and appreciation of California's native plants and to conserve them and their natural habitats through science, education, advocacy, horticulture and land stewardship.